

 **Sildenafil for lymphatic malformations** (*N Engl J Med* 2012; 366:384-386)

Lymphatic malformations are uncommon congenital vascular anomalies that can cause complications including obstruction of vital organs and their function, recurrent infection, and disfigurement. Current procedural treatments are only partially successful, and lymphatic malformations often recur. Sildenafil selectively inhibits phosphodiesterase-5, preventing the breakdown of cyclic guanosine monophosphate. Inhibition of phosphodiesterase-5 decreases the contractility of vascular smooth muscle, producing vasodilation. The drug has been approved for the treatment of pulmonary hypertension in adults and is used off-label in children with pulmonary hypertension and appears to be safe and effective. Lymphatic malformations are hypothesized to develop from primitive lymphatic sacs that arise from mesenchyme. The contraction of thickened muscular linings may increase intramural pressure and cause cystic dilatation. A potential explanation for the therapeutic effect seen in this series of three children is the relaxation of smooth muscle followed by cystic decompression. Alternatively, relaxation may allow secondary lymphatic spaces to open, or sildenafil may normalize lymphatic endothelial dysfunction.

COMMENTS Sildenafil represents an encouraging treatment for lymphatic malformations, used as monotherapy or with other treatments.

 **Antibiotic prophylaxis in elective cesarean delivery** (*Arch Surg* 2011 ;146(12):1404-9)

Perioperative antibiotic prophylaxis during elective cesarean delivery at term to reduce postoperative maternal infectious morbidity is generally used but may not be effective on the basis of the available data. Also, the optimal timing of prophylactic antibiotic administration is unclear. This study compared the effectiveness of cefazolin administered before skin incision vs cefazolin administered after umbilical cord clamping vs placebo in a 3-arm randomized trial. The primary objective of the study was to compare postoperative infectious morbidity, defined as wound infection, endometritis, or urinary tract infection. This study recruited 1112 women undergoing elective cesarean delivery at term into three groups: In group 1, cefazolin was administered 20 to 30 minutes before skin incision, in group 2 it was administered immediately after clamping of the cord and in group 3, placebo was administered before skin incision. The primary outcome was observed in 4.9% women in group 1, in 3.8% in group 2 %, whereas it was noted in 12.1% women in group 3 ($P < .001$ for group 1 plus group 2 vs group 3).

COMMENTS This study demonstrated the usefulness of prophylactic cefazolin in elective cesarean delivery for reducing postoperative maternal infectious morbidity.

 **Diagnosis of portal hypertension** (*South Med J* 2012; 105(1):6-10)

This study compared findings of grayscale and color Doppler ultrasound (CDUS) findings to that of multidetector computed tomography (MDCT) portography in the evaluation of portal hypertension in children. Thirty children (mean age, 11.4 years) with definitive clinical and laboratory diagnoses of portal hypertension were included in the study. Liver parenchymal heterogeneity was detected more often by CDUS than MDCT. CDUS and MDCT established similar results for increased right/left lobe ratio, lobulation of the liver contour, ascites, and splenomegaly, portal vein thrombosis, cavernous transformation, and recanalization of the paraumbilical vein. Collaterals were detected more by MDCT portography than by CDUS. Esophageal collaterals and azygous vein dilatation were seen only by MDCT portography.

COMMENTS The combination of these two modalities provides more comprehensive information than either alone in the diagnosis and follow-up of portal hypertension.

 **Current status of prophylactic phototherapy for preventing jaundice** (*Cochrane Database Syst Rev* 2012 Jan 18; 1:CD007966)

Low birth weight and premature infants are at major risk for hyperbilirubinemia and jaundice that can lead to bilirubin encephalopathy. This study evaluated the efficacy and safety of prophylactic phototherapy for preterm (<37 weeks gestational age) or low birth weight infants (birth weight <2500 g). Randomized controlled trials or quasi-randomised controlled studies evaluating the effects of prophylactic phototherapy for preterm or low birth weight infants were included for analysis. Fixed-effect meta-analysis for the outcomes: rate of exchange transfusion, cerebral palsy or other neurodevelopmental impairment, peak serum bilirubin level and all-cause mortality was done. There was no statistically significant difference in the rate of cerebral palsy (RR 0.96; 95% CI 0.50 to 1.85; two studies, 756 participants). The prophylactic phototherapy group had lower peak bilirubin levels (mean difference -2.73; 95% CI -2.89 to -2.57; six studies, 2319 participants) and had fewer neonates with peak unconjugated serum bilirubin levels >10 mg/dL (RR 0.27; 95% CI 0.22 to 0.33; three studies, 1090 participants) or peak unconjugated serum bilirubin levels >15 mg/dL (RR 0.13; 95% CI 0.07 to 0.23; four studies, 1116 participants).

COMMENTS Prophylactic phototherapy helps to maintain a lower serum bilirubin concentration and may have an effect on the rate of exchange transfusion and the risk of neurodevelopmental impairment.

K Rajeshwari
drkrjeshwari@hotmail.com